

REMARKS

In response to the Office Action of February 26, 2010, Applicant respectfully requests favorable reconsideration of this application.

Claims 1 - 20 are currently pending in the application. Claims 1, 11, 13, 15, 17 and 19 have been amended and Claims 2-10, 12, 14, 16, 18 and 20 have been previously amended.

Applicant would like to thank the Examiner for the courtesies extended to Applicant's Representative in a telephone interview on May 19, 2010. In accordance with MPEP §713.04, submitted concurrently herewith is a Statement of Substance of Interview for the interview.

Claims 1, 2, 4, 8-11, 13-16, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,598,451 to Blue ("Blue") in view of U.S. Patent No. 3,577,753 to Shah et al. ("Shah"). Without acceding to the rejection, Applicant has amended Claim 1 to recite:

"at least one coolant die (3,4,5,6) on each side of and adjacent to the at least one ironing die having inclined portions toward said at least one ironing die and having an internal cooling cavity (8) for circulating coolant only within the coolant die adjacent the ironing insert (12) of the ironing die (1,2), and without allowing coolant into a central bore of the at least one coolant die (3, 4, 5, 6)."

Neither Blue nor Shah, either individually or in combination, teach or suggest at least one coolant die on each side of and adjacent to the at least one ironing die having inclined portions toward said at least one ironing die and having an internal cooling cavity for circulating coolant only within the coolant die adjacent the ironing insert of the ironing die, and without allowing coolant into a central bore of the at least one coolant die, as recited in Claim 1. Specifically, Blue has no independent cooling die or spacer. Column 2, lines 17-27 of Blue describes the **internally cooled** modular die pack in which each module includes redraw and/or ironing die nibs which are **held in die cases** 15, 17, 19, 21

and 23. The die cases 15, 17, 19, 21 and 23 are **not** the same as the spacers 10 and 12 of Blue or independent coolant dies.

As stated previously, Blue discloses three die modules, each of which includes a die nib that is held in a die case (*see*, Column 2, Lines 19-27). Figure 1 of Blue discloses that die cases 15, 17, 19, 21 and 23 hold die nibs 14, 16, 18, 20 and 22, respectively (*see also*, Column 2, Lines 24-27), one face of each die case forms a part of the bore of the apparatus. In addition, Blue does not disclose or suggest that the cooling medium is supplied anywhere other than through the die module inlet ports to the die nibs via the channels or that the cooling medium exits anywhere apart from the outlet ports (*see*, Blue, Column 2, Lines 28-32). Therefore, to effectuate cooling of the die nibs in Blue, the cooling medium directly contacts each die nib via channels 42, 44, 46, 48 and 50 formed in outer walls of die nibs 14, 16, 18, 20 and 22, respectively (*see, Id*, Lines 44-47). However, allowing the cooling medium to directly contact each die nib is contrary to the “at least one coolant die (3,4,5,6) on each side of and adjacent to the at least one ironing die having inclined portions toward said at least one ironing die and having an internal cooling cavity (8) for circulating coolant only within the coolant die adjacent the ironing insert (12) of the ironing die (1,2), and without allowing coolant into a central bore of the at least one coolant die (3, 4, 5, 6),” as recited in Claim 1 (emphasis added by Applicant). Accordingly, Blue fails to disclose or suggest “at least one coolant die (3,4,5,6) on each side of and adjacent to the at least one ironing die having inclined portions toward said at least one ironing die and having an internal cooling cavity (8) for circulating coolant only within the coolant die adjacent the ironing insert (12) of the ironing die (1,2), and without allowing coolant into a central bore of the at least one coolant die (3, 4, 5, 6),” as recited in Claim 1.

Although Shah does disclose spacers (but not die cases) that are allocated references 18 only, but not reference 22, which is a jacket. In fact, Shah does not mention the insert itself and only provides cooling directly to the faces of the dies via passages 27 that are adjacent the spacers 18. The main working portions of the dies which contact the container and redraw or iron it as it is carried by a punch through the aperture 50 can be said to correspond to the die inserts. Nonetheless, the inserts of Shah are cooled by direct contact with the coolant and are not cooled by coolant channels in the directly adjacent spacers. As the Examiner admits, “Shah teaches (column 2, lines 22-32) that it is known to supply coolant between a die case (22,18) and dies (16,17) so as to provide coolant at a position adjacent the die (16,17) to circulate the coolant around the die.” (See, Office Action, Page 2, Second paragraph, Lines 12-15.) Although Shah does not have bores in the dies, as in Blue, as noted above, Shah discloses that the coolant directly contacts each die (16,17) via grooves 27 in order to cool the die (see, Blue, FIG. 1, and Column 2, Lines 22-32). However, as also noted above in regards to Blue, having grooves that allow the cooling medium to directly contact each die nib is contrary to the “at least one coolant die (3,4,5,6) on each side of and adjacent to the at least one ironing die having inclined portions toward said at least one ironing die and having an internal cooling cavity (8) for circulating coolant only within the coolant die adjacent the ironing insert (12) of the ironing die (1,2), and without allowing coolant into a central bore of the at least one coolant die (3, 4, 5, 6),” as recited in Claim 1. Therefore, Blue and Shah, both teach that cooling of the ironing die requires direct contact with the coolant. As a result, Blue and Shah, either individually or in combination, fail to teach or suggest “at least one coolant die (3,4,5,6) on each side of and adjacent to the at least one ironing die having inclined portions toward said at least one ironing die and having an internal cooling cavity (8) for circulating coolant only within the coolant die adjacent the ironing insert (12) of the

ironing die (1,2), and without allowing coolant into a central bore of the at least one coolant die (3, 4, 5, 6),” as recited in Claim 1. Therefore, Claim 1, and Claims 2, 4, 8-11, 13-16, 19 and 20 that depend therefrom, are believed to patentably distinguish over Blue and Shah and are believed to be allowable. Accordingly, the Section 103 rejection of Claim 1, and Claims 2, 4, 8-11, 13-16, 19 and 20 that depend therefrom, is believed to be overcome and the Examiner is respectfully requested to formally withdraw the rejection.

Claims 3, 5-7, 12, 17 and 18 are variously rejected under 35 U.S.C. 103(a) as being anticipated by Blue in view of Shah and further in view of United States Patent Number 6,776,021 to Scholey (hereinafter “Scholey”) or further in view of United States Patent Number 4,223,544 to Main (hereinafter “Main”) or further in view of United States Patent Number 5,692,409 to Cheers (hereinafter “Cheers”). Scholey, Main and Cheers all fail to make up for the deficiencies in Blue and Shah. Therefore, for at least those reasons given above for Claim 1, the Section 103 rejections of Claims 3, 5-7, 12, 17 and 18 are also believed to be overcome and the Examiner is respectfully requested to formally withdraw the Section 103 rejections of Claims 3, 5-7, 12, 17 and 18 and issue a Notice of Allowance for Claims 1-20.

Claims 11, 13, 15, 17 and 19 have been amended to each recite “central bore” to be consistent with amended Claim 1.

Should the Examiner believe that any further action is necessary to place this application in better form for allowance, the Examiner is invited to contact Applicant’s representative at the telephone number listed below.

The Commissioner is hereby authorized to charge to Deposit Account No. 50-1165 (T4515-16172US01) any fees under 37 C.F.R. §§ 1.16 and 1.17 that may be required by this paper and to credit any overpayment to that Account. If any extension of

time is required in connection with the filing of this paper and has not been separately requested, such extension is hereby requested.

Respectfully submitted,

Date: May 26, 2010

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